

WHAT IS CLAIMED IS:

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

- 1 1. A laminated foam board comprising:
2 two facers disposed on opposing broad flat surfaces of said board;
3 a foam core to which the two facers are adhered, the foam core being a closed-
4 cell foam formed using a mixture of the methyl esters of glutaric, succinic, and adipic
5 acid; and
6 wherein by virtue of using the mixture a bonding strength of said facers to said
7 foam core is greater than had the mixture not been used.
- 1 2. The apparatus of claim 1, wherein said foam board is a polyurethane
2 laminated foam board.
- 1 3. The apparatus of claim 1, wherein said foam board is a polyurethane modified
2 polyisocyanurate laminated foam board.
- 1 4. The apparatus of claim 1, wherein said mixture comprises methyl esters of
2 about 59% glutaric acid, about 20% succinic acid, and about 21% adipic acid.
- 1 5. The apparatus of claim 1, wherein the foam comprises a polyol and an organic
2 polyisocyanate, and wherein said mixture is added at an add-on rate within the range of
3 about 0.5 to about 5.0 parts per hundred of polyol (pphpp).
- 1 6. The apparatus of claim 5, wherein said mixture is added at an add-on rate
2 within the range of from about 1.0 to about 3.0 pphpp.
- 1 7. The apparatus of claim 1, wherein the foam core is blown with an expansion
2 agent which includes n-pentane.
- 1 8. The apparatus of claim 1, wherein the foam core is formed with an amount of
2 the mixture whereby a peel strength resistance for the facers is greater than 1.0 pound.

1 9. A polyurethane modified polyisocyanurate laminated foam board comprising:
2 two facers disposed on opposing broad flat surfaces of said board;
3 a foam core to which the two facers are adhered, the foam core being a closed-
4 cell foam formed using a mixture of the methyl esters of glutaric, succinic, and adipic
5 acid and utilizing n-pentane as an expansion agent, an amount of the mixture utilized
6 being chosen to enhance adhesion of the facers to the foam core.

1 10. The apparatus of claim 9 wherein said mixture comprises methyl esters of
2 about 59% glutaric acid, about 20% succinic acid, and about 21% adipic acid.

1 11. The apparatus of claim 9 wherein the foam comprises a polyol and an
2 organic polyisocyanate, and wherein said mixture is added at an add-on rate within the
3 range of about 0.5 to about 5.0 parts per hundred of polyol (pphpp).

1 12. The apparatus of claim 9 wherein said mixture is added at an add-on rate
2 within the range of from about 1.0 to about 3.0 pphpp.

1 13. The apparatus of claim 9, wherein the amount of the mixture utilized is
2 chosen to provide a peel strength resistance for the facers of greater than 1.0 pound.

1 14. A method of making a closed-cell polyurethane modified polyisocyanurate
2 laminated foam board, comprising:
3 adding to a foam formulation a mixture of the methyl esters of glutaric, succinic,
4 and adipic acid to improve adhesion of a facer to the foam board;
5 curing the foam formulation in a manner to provide foam core interposed
6 between two facers adhered to the foam core.

1 15. The method of claim 14, wherein the step of adding the mixture comprises
2 adding methyl esters of about 59% glutaric acid, about 20% succinic acid, and about
3 21% adipic acid.

1 16. The method of claim 14, wherein the foam formulation comprises a polyol
2 and an organic polyisocyanate, and wherein said mixture is added at an add-on rate
3 within the range of about 0.5 to about 5.0 parts per hundred of polyol (pphpp).

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1 17. The method of claim 14, wherein said mixture is added at an add-on rate
2 within the range of from about 1.0 to about 3.0 pphpp.

1 18. The method of claim 14, further comprising blowing the foam core with an
2 expansion agent which includes n-pentane.

1 19. The method of claim 14, further comprising choosing an amount of the
2 mixture to provide a peel strength resistance for the facers of greater than 1.0 pound.

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